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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,070	02/18/2005	Kazuya Arakawa	1254-0270PUSI	5837
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			EXAMINER KARIMI, PEGEMAN	
			ART UNIT 2629	PAPER NUMBER
			NOTIFICATION DATE 06/05/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/525,070	Applicant(s) ARAKAWA ET AL.	
	Examiner Pegeman Karimi	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/18/05, 5/18/05, 4/28/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The references listed on the Information Disclosure statement filed on 2/18/2005, 5/18/2005, and 4/28/2006 have been considered by examiner; see attached PTO-1449.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

4. Claim 14 is objected to because The limitations "the x-axis component" page 4, col. 2, line 15 and limitation "the y-axis component" page 4, col. 2, line 17 should not be within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so

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as to avoid confusion with other numbers or characters which may appear in the claims.

See MPEP § 608.01(m).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by McCambridge (U.S. Patent 5,565,887).

As to claims 1, 6, 8, McCambridge discloses a display system (Fig. 1) including a pointing device (13 and 16) provided with

motional information detecting means (10) for detecting motional information including a motional direction and a movement amount (change in x and y direction) of a pointing position (curser position) in a first direction and in a second direction that crosses the first direction (x and y directions, col. 5, lines 40-41) and

a display device provided with motional information acquiring means (10) for acquiring the motional information from the pointing device (13 and 16, col. 3, lines 12-13) and

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a controller (10) that controls so that a display position is moved based upon the acquired motional information (col. 3, lines 13-17), comprising:

means (10) for comparing the absolute value of a component in the first direction and the absolute value of a component in the second direction in relation to a motional direction (col. 5, lines 48-50) included in the movement amount information first acquired and determining that the direction having the larger absolute value is a first moved direction of the display position (col. 5, lines 52-56).

As to claims 2 and 7, McCambridge teaches a display system (Fig. 1) comprising:

means (10) for executing control for converting leading-in areas (x or y direction) so that the leading-in areas in a direction in the last input (col. 5, lines 52-56, col. 7, lines 2-5) are increased in a process for determining the next or subsequent motional direction (increase in absolute value of X direction changes the direction to rightward, col. 7, lines 7-13).

As to claim 3, McCambridge teaches a display device (11) comprising:

movement amount monitoring means (10) for monitoring a movement amount of the pointing position while it is determined that a motional direction is either of the first direction (upward) or the second direction (rightward), (col. 7, lines 2-12); and

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control means (10) for executing control for converting leading-in areas (x or y direction) in a direction in the last input (col. 5, lines 52-56, col. 7, lines 2-5) in a process for determining the next or subsequent motional direction in case increase/decrease equal to or larger than a certain value is detected (certain value = ten times the absolute value, col. 7, lines 7-13) in relation to the component in the first direction (vertically upward) or the component in the second direction (rightward) as the movement amount of the pointing position (from point B to C, col. 7, line 2).

As to claim 4, McCambridge teaches the control means (10) is means for executing control for converting leading-in areas (x or y direction, col. 4, lines 60-61) so that leading-in areas in a direction in which a component increases are increased (the coordinate in x direction has increased from 70 to 80 the cursor moves rightward in the positive direction, col. 4, lines 66-67; col. 5, lines 1-8)

As to claim 5, McCambridge teaches a display system (Fig. 1), comprising:

movement amount monitoring means (10) for monitoring a movement amount of the pointing position while either the first direction or the second direction is determined as a motional direction (x or y direction col. 5, lines 3-8); and

means (10) for judging that a movement input is provided only in a direction (x direction) that crosses a determined direction (y direction) in case the absolute value of a motional component in the determined direction decreases by fixed width (fixed width = one pixel, col. 5, lines 3-8) and a motional component in the direction that crosses the determined direction is detected (col. 6, lines 66-67; col. 7, lines 2-13).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCambridge (U.S. Patent 5,565,887) in view of Rekimoto (Pub. No. 2001/0048423).

As to claim 9, this claim differs from claim 1 only in that the limitations "angular velocity" is recited. McCambridge does not teach the angular velocity. Rekimoto clearly teaches the use of an angular velocity information of a pointing position in a first direction and second direction (Y-axis and Z-axis, [0033] lines 1-2; [0034]). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the angular velocity information of Rekimoto to the display system of McCambridge because when a rotational angular velocity is applied to a vibrating object, Coriolis force occurs in the direction perpendicular to the vibration direction.

As to claim 10, McCambridge teaches a display system (Fig. 1) comprising:

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Control means (10) for executing control for converting leading-in areas (x or y direction) so that the leading-in areas in a direction in the last input (col. 5, lines 52-56, col. 7, lines 2-5) are increased in a process for determining the next or subsequent motional direction (increase in absolute value of X direction changes the direction to rightward, col. 7, lines 7-13).

As to claim 11, McCambridge teaches a motional information detecting means (10) is further provided with movement amount monitoring means (10) for monitoring a movement amount of the pointing position while it is determined that a motional direction is either of the first direction (upward) or the second direction (rightward), (col. 7, lines 2-12); and

control means (10) for executing control for converting leading-in areas (x or y direction) in a direction in the last input (col. 5, lines 52-56, col. 7, lines 2-5) in a process for determining the next or subsequent motional direction in case increase/decrease equal to or larger than a certain value is detected (certain value = ten times the absolute value, col. 7, lines 7-13) in relation to the component in the first direction (vertically upward) or the component in the second direction (rightward) as the movement amount of the pointing position is detected is provided (from point B to C, col. 7, line 2).

As to claim 12, McCambridge teaches the control means (10) is control means for executing control for converting leading-in areas (x or y direction, col. 4, lines 60-61)

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so that leading-in areas in a direction whose component increases are increased (the coordinate in x direction has increased from 70 to 80 the cursor moves rightward in the positive direction, col. 4, lines 66-67; col. 5, lines 1-8)

As to claim 13, McCambridge teaches a display system (Fig. 1), comprising:

movement amount monitoring means (10) for monitoring a movement amount of the pointing position while either the first direction or the second direction is determined as a motional direction (x or y direction col. 5, lines 3-8); and

means (10) for judging that a movement input is provided only in a direction (x direction) that crosses a determined direction (y direction) in case the absolute value of a component of the determined direction decreases by fixed width (fixed width = one pixel, col. 5, lines 3-8) and a component of the direction that crosses the determined direction is detected (col. 6, lines 66-67; col. 7, lines 2-13).

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCambridge (U.S. Patent 5,565,887), in view of Rekimoto (Pub. No. 2001/0048423), further in view of Gest (U.S. Patent 5,333,247).

As to claim 14, McCambridge discloses a function for moving an image such as a cursor (col. 3, lines 35-39) and

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means (10) for comparing a component in a horizontal direction (the x-axis component) of the movement amount (col. 3, lines 48-56) first acquired after the pointing device is reset (col. 4, lines 9-13) and

a component in a vertical direction (the y-axis component), judging that a movement input is provided only in the horizontal direction (x direction) in case the absolute value of the x-axis component is larger than the absolute value of the y-axis component (col. 5, lines 52-56) and

judging that a movement input is provided only in the vertical direction (y direction) in case the absolute value of the y-axis component is larger than the absolute value of the x-axis component (col. 5, lines 66-67 and col. 6, lines 1-6);

McCambridge does not teach the angular velocity detection, however, Rekimoto teaches the display device (3, Fig. 1) for presentation formed by a pointing device (50) provided with means (gyro 1a, 1b, 1c) for detecting angular velocity in a horizontal direction and in a vertical direction ([0033], lines 3-6; [0034], lines 1-4) and;

means (13) for transmitting the detected angular velocity information ([0039], lines 1-3) and;

a display device (3) provided with receiving means (cursor) for receiving the angular velocity information transmitted from the pointing device ([0092]) and;

a point displayed on a screen (Curser, Fig. 5) according to a movement amount acquired by sampling the received angular velocity information ([0048]). Therefore it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the angular velocity information of Rekimoto to the display system of McCambridge because when a rotational angular velocity is applied to a vibrating object, Coriolis force occurs in the direction perpendicular to the vibration direction.

McCambridge and Rekimoto do not teach leading in areas encircled by straight lines $y=ax$ and $y=-ax$. Gest teaches means (14) for judging that a movement input is continuously provided only in the horizontal direction (col. 8, lines 46-51) in case the coordinates of a movement amount input next or subsequently after the movement input is provided only in the horizontal direction are located in leading-in areas (area 21A and area 21C) encircled by straight lines $y=ax$ and $y=-ax$ ($a>1$) (Fig. 2D the dashed cross lines divide the screen into regions) having the x-axis between them and judging that a movement input is provided only in the vertical direction in case the coordinates are located outside the above-mentioned areas (If the movement input is placed in areas 21B and 21D it will scroll in vertical direction, col. 8, lines 51-53); and

means (14) for judging that a movement input is continuously provided only in the vertical direction (col. 8, lines 51-54) in case the coordinates of a movement amount input next or subsequently after the movement input is provided only in the vertical direction are located in leading-in areas (21B and 21D) encircled by straight lines $y=x/a$ and $y=-x/a$ (Fig. 2D the dashed cross lines divide the screen into regions) having the y-axis between them and judging that a movement input is provided only in the horizontal direction in case the coordinates are located outside the above-mentioned areas (col. 8, lines 46-51). Therefore it would have been obvious to one of ordinary skill in the art at

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the time the invention was made to have used the leading-in areas of Gest to the display device of McCambridge as modified by Rekimoto to provide scrolling of the data buffer by a preset amount in a selectable direction in response to the position of the cursor with respect to the box, and in response to the operation of the preset scroll selector (col. 4, lines 17-21).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Imai (U.S. Patent 5,850,213) discloses a three-dimensional image special effect apparatus wherein the motion of an image across a display screen is controlled by a track ball and rotary ring.

Inquiries

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegeman Karimi whose telephone number is (571) 270-1712. The examiner can normally be reached on Monday-Friday 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pegeman Karimi
5/17/07


CHANH D. NGUYEN
SUPERVISORY PATENT EXAMINER